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| APPLICATION NO.                  | FILING DATE                             | FIRST NAMED INVENTOR    | ATTORNEY DOCKET NO. | CONFIRMATION NO.      |  |
|----------------------------------|---|-------------------------|---------------------|-----------------------|--|
| 10/849,972                       | 05/20/2004                              | Ronald E. Lux           | 59591US002          | 8633                  |  |
| 32692                            | 7590 04/04/2006                         | EXAN                    |                     | MINER                 |  |
| 3M INNOVATIVE PROPERTIES COMPANY |   |                         | CHEVALIER,          | CHEVALIER, ALICIA ANN |  |
|                                  | PO BOX 33427<br>ST. PAUL, MN 55133-3427 |                         | ART UNIT            | PAPER NUMBER          |  |
| 511.1.62, 1.1.v. 55155 C.E.      |   |                         | 1772                |                       |  |
|                                  |   | DATE MAILED: 04/04/2006 |                     |                       |  |

Please find below and/or attached an Office communication concerning this application or proceeding.

W

|  | Application No.   | Applicant(s)          |  |  |  |
|--|---|-----------------------|--|--|--|
| Office Action Commons  | 10/849,972  | LUX, RONALD E.        |  |  |  |
| Office Action Summary  | Examiner  | Art Unit              |  |  |  |
|  | Alicia Chevalier  | 1772                  |  |  |  |
| The MAILING DATE of this communication app<br>Period for Reply   | ears on the cover sheet with the c  | orrespondence address |  |  |  |
| A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). |   |                       |  |  |  |
| Status   |   |                       |  |  |  |
| 1)⊠ Responsive to communication(s) filed on 12 Ja  | nuary 2006.   |                       |  |  |  |
|  | action is non-final.  | •                     |  |  |  |
| <i>—</i>   | Since this application is in condition for allowance except for formal matters, prosecution as to the merits is |                       |  |  |  |
| closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  |   |                       |  |  |  |
| Disposition of Claims  |   |                       |  |  |  |
| 4)⊠ Claim(s) <u>1-26</u> is/are pending in the application.  |   |                       |  |  |  |
| 4a) Of the above claim(s) <u>19-26</u> is/are withdrawn from consideration.  |   |                       |  |  |  |
| 5) Claim(s) is/are allowed.  |   |                       |  |  |  |
| 6)⊠ Claim(s) <u>1-18</u> is/are rejected.  |   |                       |  |  |  |
| 7) Claim(s) is/are objected to.  |   |                       |  |  |  |
| 8) Claim(s) are subject to restriction and/or  | election requirement.   |                       |  |  |  |
| Application Papers   |   |                       |  |  |  |
| 9) The specification is objected to by the Examiner.   |   |                       |  |  |  |
| 10)☐ The drawing(s) filed on is/are: a)☐ accepted or b)☐ objected to by the Examiner.  |   |                       |  |  |  |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  |   |                       |  |  |  |
| Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).   |   |                       |  |  |  |
| 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.   |   |                       |  |  |  |
| Priority under 35 U.S.C. § 119   |   |                       |  |  |  |
| 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of:   |   |                       |  |  |  |
| 1.☐ Certified copies of the priority documents have been received.   |   |                       |  |  |  |
| Certified copies of the priority documents have been received in Application No.   |   |                       |  |  |  |
| 3. Copies of the certified copies of the priority documents have been received in this National Stage  |   |                       |  |  |  |
| application from the International Bureau (PCT Rule 17.2(a)).  |   |                       |  |  |  |
| * See the attached detailed Office action for a list of the certified copies not received.   |   |                       |  |  |  |
|  |   |                       |  |  |  |
| Attachment(s)  | _   |                       |  |  |  |
| Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 4) Interview Summary (<br>Paper No(s)/Mail Da   |                       |  |  |  |
| Notice of Draftsperson's Patent Drawing Review (PTO-948)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  Paper No(s)/Mail Date 4-4-66, \$-17-05, \$(10/64)   | 5) Notice of Informal Pa  |                       |  |  |  |

### **DETAILED ACTION**

1. Claims 1-26 are pending in the application, claims 19-26 are withdrawn from consideration.

#### Election/Restrictions

2. Applicant's election with traverse of Group I, claims 1-18, in the reply filed on January 12, 2006 is acknowledged. The traversal is on the ground(s) that the restriction would require substantial duplication of applications. This is not found persuasive because the examiner has already shown why restriction is proper, e.g. because the inventions are distinct for the reasons given, in the written restriction mailed December 13, 2005, and have acquired a separate status in the art as shown by their different classification and have acquired a separate status in the art because of their recognized divergent subject matter and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore made FINAL.

## Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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4. Claims 1-18s are rejected under 35 U.S.C. 103(a) as being unpatentable over Lux (U.S. Patent No. 5,928,070) in view of Emerson et al. (U.S. Publication No. 2003/022318).

Lux discloses an abrasive article (*title*) comprising a web (*col. 5, lines 64-67*) and a binder (*col. 7, line 41*). The web comprising a multitude of substantially continuous three dimensionally undulated thermoplastic filaments autogenously bonding where they contact one another, wherein the filaments have a diameter in a range from 0.1 mm to 3 mm and the web has a coil web in a range from 0.1 to 3.0 kg/m² (*col. 5, lines 64-67 and col. 6, lines 7-26*). The thermoplastic filaments comprise at least one of polycaprolactum or poly(hexamethylene adipamide) (*col. 6, lines 57-61*). The article further comprises a quantity of particles affixed to the surface. The particles are in the range of 0.1 to 5 kg/m² and comprise at least one of slag, alumina, thermoplastic polymer, thermoset polymer, glass mullite, sand, rubber, pumice, topaz, garnet, corundum, silicon carbine, zirconia, ceramic, aluminum oxide, or diamond (*col. 8, lines 46-65*). The article further comprises a size coat. The binder and size coat comprise polyurethane (col. 7, line 41 and col. 8, lines 39-44).

Lux fails to disclose three-dimensional textured article.

Emerson discloses an abrasive article comprising a three dimensional shape with a first, second and third portion where the second and third portions are positioned at an angle of at least 45 degrees relative to the first surface (figure 2). The additional surface area of the three dimensional article helps sufficiently decrease surface roughness and remove the grinding marks or other small imperfections (page 1, paragraph [0002]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to make Lux's abrasive article three dimensional as taught by Emerson in order to helps

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sufficiently decrease surface roughness and remove the grinding marks or other small imperfections.

The preamble "stair tread," "stairway" and "ladder rung" are deemed to be a statement with regard to the intended use and is not further limiting in so far as the structure of the product is concerned. In article claims, a claimed intended use must result in a *structural difference* between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. MPEP § 2111.02.

#### Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ac 4/3/06

ALICIA CHEVALIER PRIMARY EXAMINER